

ABSTRACT OF THE DISCLOSURE

A digital receive-focusing apparatus for receive-focusing ultrasound channel signals from a plurality of transducers in an ultrasound imaging system is provided. The digital receive-focusing apparatus in accordance with the present invention comprises a plurality of channel modules responsive to the ultrasound channel signals for producing a receive-focused beam. Each of the plurality of channel modules comprises an analogue multiplexer for multiplexing at least two ultrasound channel signals and a signal processor for digitally processing and compensating the multiplexed signal.